OSHIBA

STEREO CASSETTE DECK



For TE, TU, AY



For TA, TC, VF

SPECIFICATIONS

Power Source:
AC 220V 50Hz for Europe
AC 240V 50Hz for United Kingdom & Australia
AC 115V/230V 50Hz/60Hz for Southeast Asia,

South America and Middle East.

AC 120V 60Hz for U.S.A. and Canada Power Consumption:

20W

Track Type.

4-track, 2-channel stereo Recording System:

AC bias

Erase System

AC erasure

Super AP Head x 1 4-gap AF Head x1

Motor

DC servo motor

Tape Speed:

4.8 cm/sec

Fast Forward/Rewind Time:

Approx. 80 seconds (C-60 tape)

Semiconductors:

10 ICs, 21 transistors, 27 diodes Wow and Flutter: 0.05% (WRMS) 0.16% (DIN, Peak-to-Peak)

Signal/Noise Ratio

62 dB (Metal tape)

58 dB (Chrome tape)

Dolby in, weighted, line, peak Dolby effect: 5 dB improvement at 1 kHz.

10 dB improvement at 5 kHz

Frequency Response: at 0 dB input

35 Hz to 12.5 kHz Metal tape

Chrome tape 35Hz to 8 kHz

at -20 dB input

Metal tape 35 Hz to 18 kHz Chrome tape 35 Hz to 18 kHz Normal tape 35 Hz to 17 kHz

Input Jack.

Mic 0.25 mV (600 Ohms to 10 k Ohms) Line 70 mV (Over 50 k Ohms)

Output Jack.

Line 0.4V (50 k Ohms)

Headphones 1 mW (8 Ohms)

Dimensions

257(W) x 106(H) x 214(D) mm

(including feet and protruding knobs)

Weight.

3.3ka

Accessories:

Connection cords (PIN-PIN) \times 2

Head cleaning stick x 1

Dust cover x 1

Specifications are subject to change without notice.

TA, TC, TE, TU, AY, VF

5. TECHNICAL POINTS

Peak Meter Drive Circuit

The meter drive circuit operates for -B side to be 0V. The Q505 (TA7318P) is an IC for wide range meter drive and operates as follows.

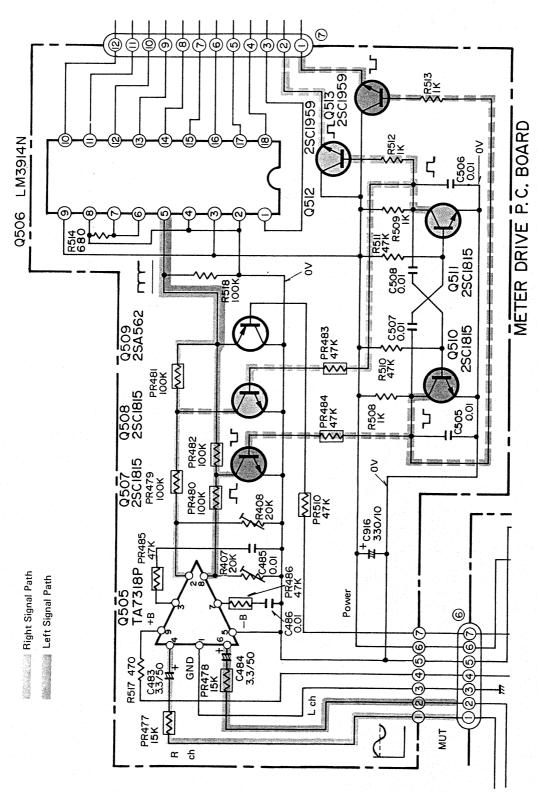


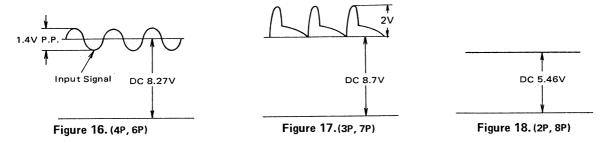
Figure 15.

Input terminals are divided in two channels at pin Nos. 4 (R ch) and 6 (L ch) of Q505.

The signal inputed in these terminals makes a wave form on VTVM as shown in Figure 16 (Input signal: f = 1 kHz, Dolby Point: 580 mV, +3 dB). The signal outputed at the pin Nos. 3 and 7 makes a waveform as shown in Figure 17. This waveform occurs with a charge or discharge of C485 and C486, and is charged in accordance with an input signal level.

The output signal at pin Nos. 2 and 8 terminal makes a rectifired waveform (figure 18) and make the meter to drive

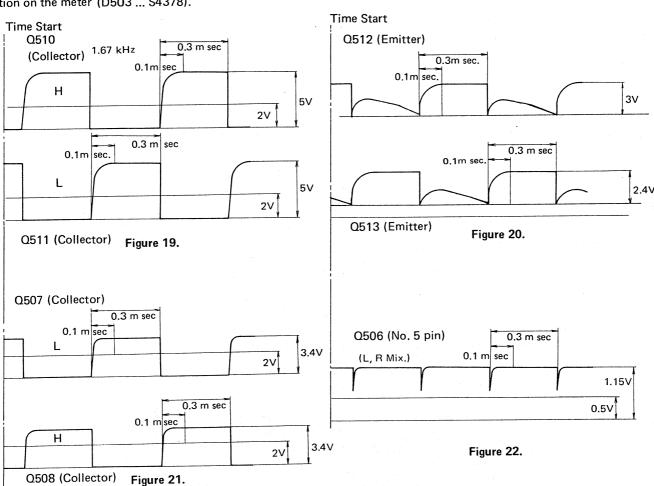
This waveform is also changed with an input signal level. The present output voltage level that is about 5.5V, is further attenuated to be an appropriate level to a meter driving through R479 to R482. (Figure 18)



Peak Meter Switching Circuit (Non-stable Multivibrator)

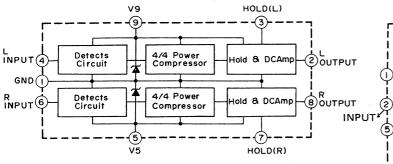
The left or right indication of the meter is made with an alternate switching operation of the power supply portion on the meter (D503 ... S4378).

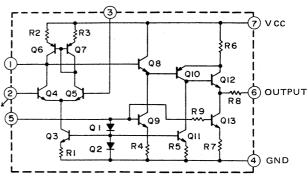
Low-to-High level of each switching transistor (Q507, 508, Q510, 511, Q512, 513) is as shown in Figure 15. (For each signal and waveform, refer to Figure 19 to 22).



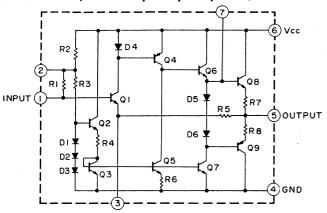
• TA7318P (Wide Range Peak Power Meter Drive)

• TA7136P (Two Power Pre-Amplifier)

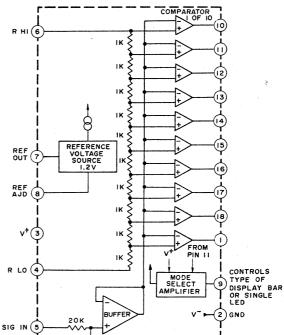




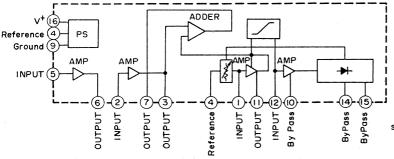
• TA7140P (Low Frequency Amplifier)



• LM3914N (LED Drive for Dot/Bar Indication)



NE646BN-C (Dolby Noise Reduction)



• TA7322P (Two Power Pre-Amplifier for High Frequency & Low Noise)

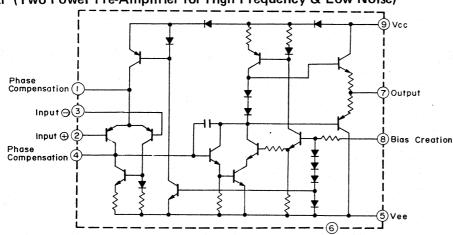
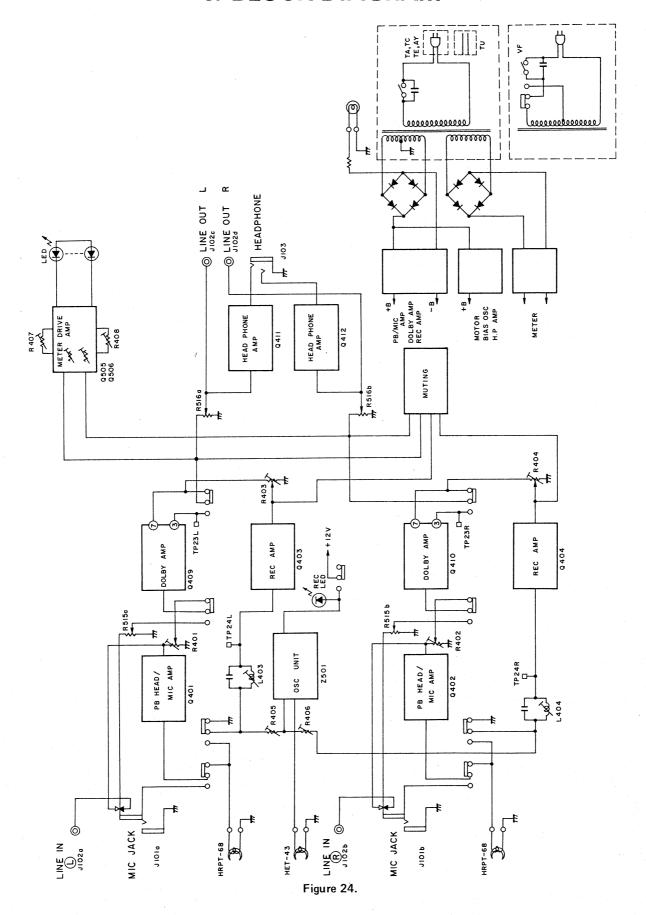


Figure 23.

6. BLOCK DIAGRAM



7. ELECTRICAL ADJUSTMENTS

■ ADJUSTMENT LOCATIONS

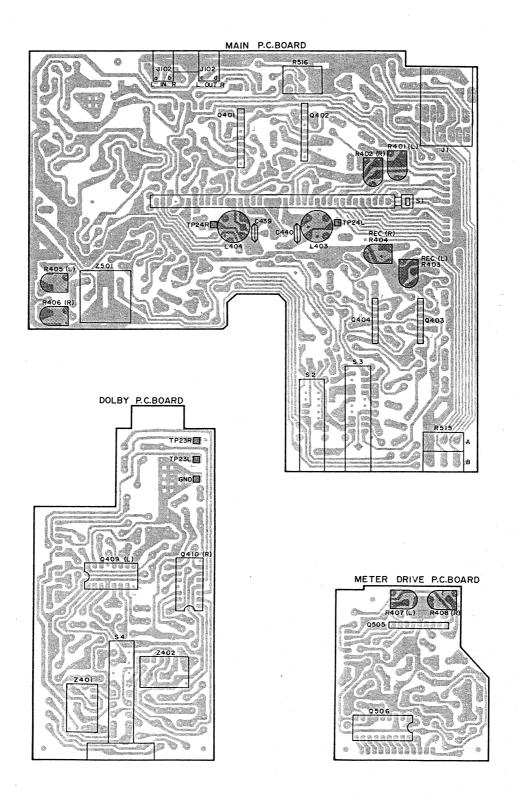


Figure 25.

ADJUSTMENT PROCEDURES

| Adjustment Items | Spec. Value | Test Tape | Volume | | Switch | | Adjustment | Test | Input | Connection | Remarks | |
|--|----------------------|--------------|--------|------|------------------|------------------|------------|--|----------------|-----------------------------|----------------|---|
| | | | Rec. | Out | BIAS | EQ | NR | Parts | Points | (ATT) | | |
| Head Azimuth Confirmation | Ma×. | MTT-114 | | Max. | NOR | NOR | OUT | Adjusting Screw (See Figure 26) | Line Output | | - . | Max. output level on AC voltmeter. After adjusting, must be applied a locking paint to the adjusting screw. |
| Playback Sensitivity | 580 ±10mV | MTT-150 | _ | Max. | NOR | NOR | OUT | R401 R402 | TP23L TP23R | - - | Figure 27 | VTVM indicates 580 ±10mV (TP23L): Cathode side of C469 (10mfd/16V). |
| Bias Leak | Min. | - | _ | Max. | NOR | NOR | OUT | L403 L404 | TP24L TP24R | _ | Figure 28 | VTVM indicates minimum. |
| Line Input | 580 ±10mV | <u>-</u> | Adjust | Max. | CrO ₂ | CrO₂ | OUT | Recording Volume | TP23L TP23R | 400 Hz -20 dB ±0.5 | Figure 29 | VTVM indicates 580 ±10mV |
| Level Meter | Meter Ind.: —3 dB | : | Adjust | Max. | CrO ₂ | CrO₂ | OUT | R407 R408 | Meter | 400 Hz -26 dB ±0.5 | - | Four squares (LEDs) of 0 dE to -3 dB do not illuminate. |
| | Meter Ind.: +3 dB | | Adjust | Max. | CrO ₂ | CrO ₂ | OUT | _ | Meter | 400 Hz -20 dB | <u>-</u> | One square (Red LED) illuminates. |
| Rec/Play Frequency Characteristics | 0 ±1 dB | AC-511 | Adjust | Max. | CrO ₂ | CrO₂ | OUT | R405 R406 | Line Output | 400 Hz/ 10 kHz –43 dB | Figure 30 | Difference between 400 Hz and output is kept within 0 ±1 dB on VTVM. |
| Rec./Play Sensitivity | 580 ±10mV | AC-511 | Adjust | Max. | CrO ₂ | CrO₂ | OUT | R403 R404 | TP23L TP23R | 400 Hz -20 dB | Figure 31 | VTVM indicates 580mV ±10mV (Reference value). |

• Test conditions: Supply voltage: See specifications on book cover, Input: 0 dB (1 V rms). Line input impedance: 600 ohm Line output load impedance: 47K ohm, Test point load impedance: non-load.

■ TEST EQUIPMENT CONNECTIONS

■ TEST EQUIPMENTS

- 1. VTVM (Vacuum Tube Voltmeter)
- 2. Signal Generator
- 3. Resistance Attenuator
- 4. Screwdriver
- Test Tapes
 MTT-114 (10 kHz)
 MTT-150 (400 Hz)
 AC-511 (CHROME TAPE)

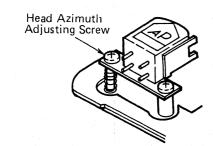


Figure 26.

(Playback Sensitivity Adjustment)

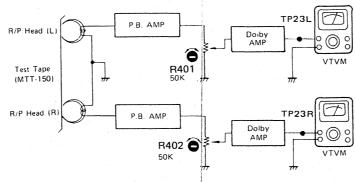


Figure 27.

(Bias Leak Adjustment)

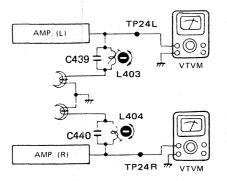


Figure 28.

(Line Input Adjustment)

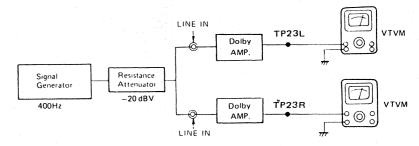


Figure 29.

(Rec/Play Frequency Characteristics Adjustment)

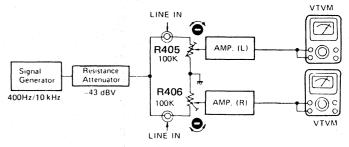


Figure 30.

(Rec/Play Sensitivity Adjustment)

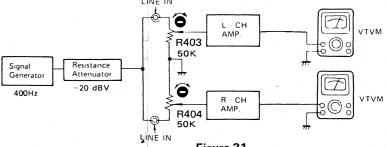


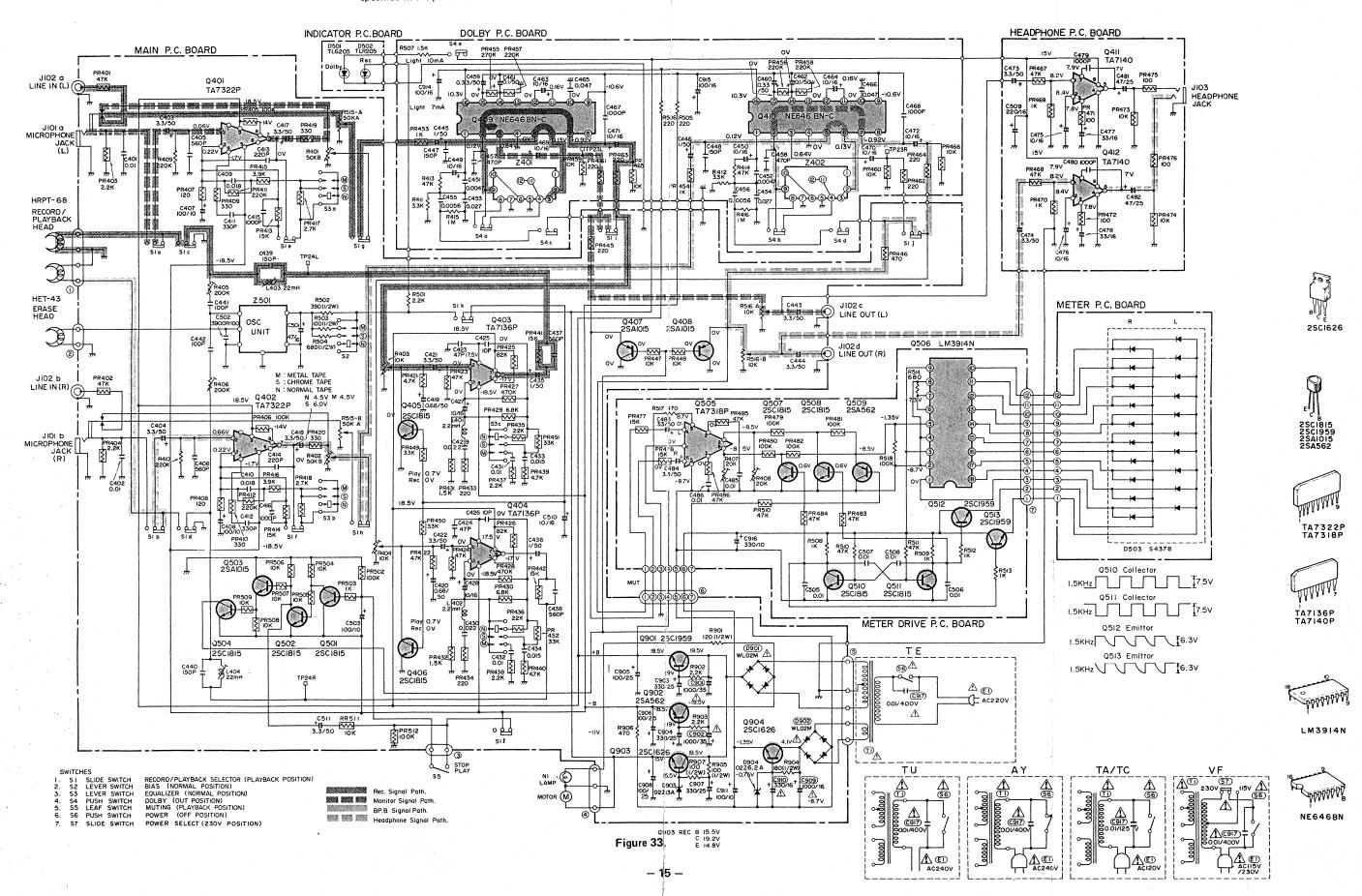
Figure 31.

8. P.C.BOARD PARTS LOCATIONS To Headphone F.C. Board 8 TA/TC To Meter Drive P. C. Board 6 MAIN P.C.BOARD DOLBY P.C.BOARD Power Transfomer 0 □TP23R ☐TP23L ©917) Ground Ground NI Lamp BLK WHT Motor Erase Head Record/Playback To Main P.C.Board 8 Normal 4.5V Leaf Switch Chrome 6.0 V Metal 9.7 V TO Main P.C.Board (5) HEADPHONE P.C.BOARD METER DRIVE P.C.BOARD 1 2 3 4 5 0 V -8.5V 0 V 0 V -8.7V 6 7 8 9 0 V 0 V -8.5V 8.7V To Main P.C.Board ⑥ P H G Q403,404 Lighting IOmA | 2 . 3 | 4 | 5 | 6 | 7 | 17.5 | 0 V | 0 V | -18.5 | -17 V | 0 V | 18.5 | V | Lighting 7mA 1.5KHz 7.5V INDICATOR P.C.BOARD Q411,412 Figure 32. 1.5KHz Q513 Emittor F6.3V The \triangle mark, the symbol No. circled with rectangle in the schematic diagram and the shaded area in the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or Q506 specified in the parts list. METER P.C.BOARD - 14 -

9. SCHEMATIC DIAGRAM

CAUTION:

The \triangle mark, the symbol No. circlude with rectangle in the schematic diagram and the shaded area in the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list.



10. CABINET PARTS LOCATIONS

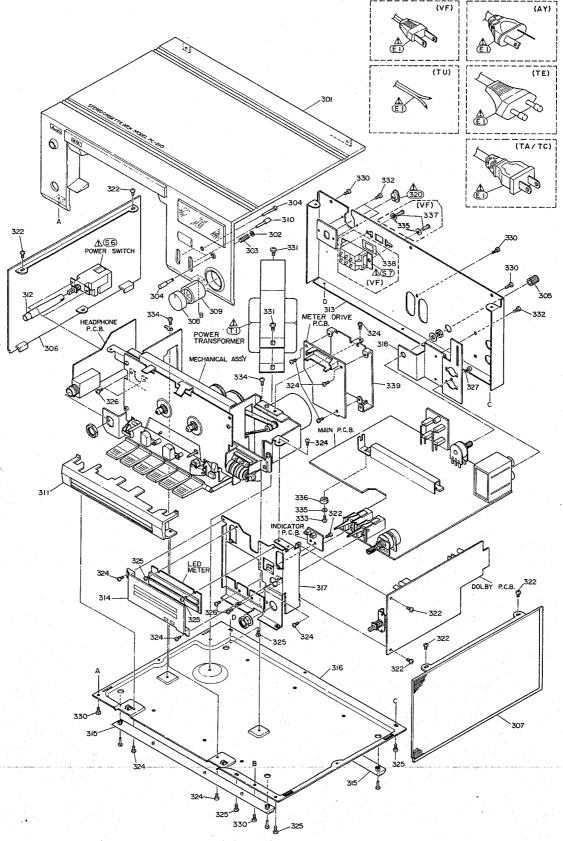
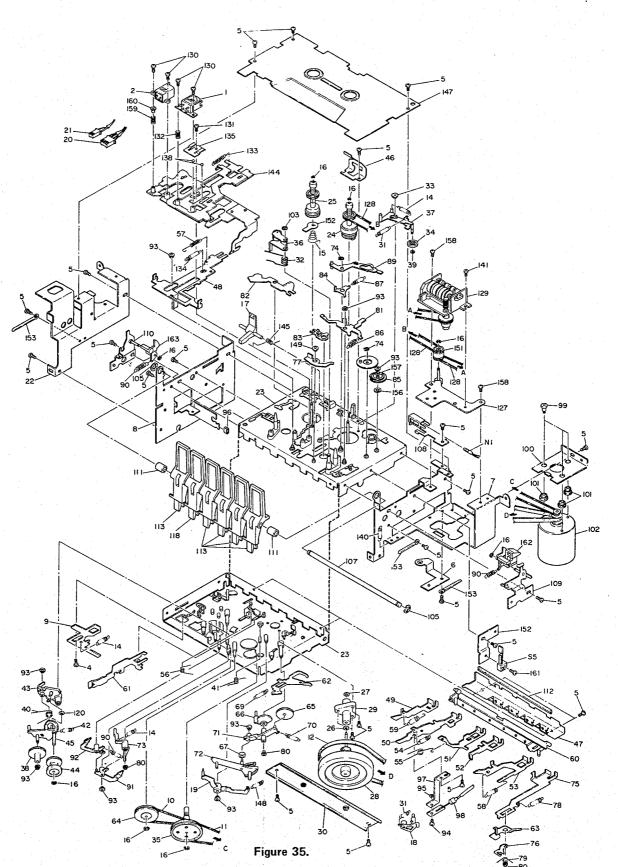


Figure 34.

NOTE: Parts excluded in the Parts List are not available as replacement parts.

11. MECHANICAL PARTS LOCATIONS



NOTE: Parts excluded in the Parts List are not available as replacement parts.

12. PARTS LIST

CAUTION:
The mark, the symbol No. circled with rectangle in the schematic diagram and the shaded area in the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list.

| Symbol No. | Part No. | Description | | | | |
|------------|----------|---|--|--|--|--|
| | MEC | HANICAL PARTS | | | | |
| 1 | 22217343 | Head, Record/Playback (HRPT-68) | | | | |
| 2 | 22218213 | Head, Erase (HET-43) | | | | |
| 4 | 22707461 | Screw, Tapping, | | | | |
| • | | 2.6φ x 6mm (BID) | | | | |
| 5 | 22707350 | Screw, 2.6\(\phi\) x 5mm (DT BID) | | | | |
| 10 | 25755416 | Belt Cam-wheel | | | | |
| 11 | 25755417 | Belt, Meddle Pulley | | | | |
| 12 | 25755434 | Belt Drive | | | | |
| 14 | 25771584 | Spring, Brake Lever | | | | |
| 15 | 25772538 | Spring, Sift lever | | | | |
| 16 | 25735159 | E Washer, 1.5ϕ | | | | |
| 17 | 25782308 | Lever, Erase Prevention | | | | |
| 18 | 25782310 | Lever, Record Prevention | | | | |
| 19 | 25782312 | Lever, Sift | | | | |
| 24 | 25702312 | Take-up Pulley Ass'y | | | | |
| 25 | 25712364 | Supply Pulley Ass'y | | | | |
| . 26 | 25764398 | Washer, Nylon, 2.5ϕ | | | | |
| 27 | 25764520 | Washer PA, 2.4ϕ | | | | |
| 28 | 25704520 | Flywheel Ass'y | | | | |
| 20 29 | 25717410 | Holder, Capstan Ass'y | | | | |
| 29 31 | 25771957 | Spring, Take-up Idler | | | | |
| 32 | 25773447 | Spring, Pinch Roller, Right | | | | |
| 33 | 25783195 | Bush, 2.5ϕ | | | | |
| 33 34 | 25763195 | Take-up Idler Ass'y, Right | | | | |
| 35 | 25713471 | Puller Ass'y, Center | | | | |
| 36 | 25717440 | Pinch Lever Ass'y, Right | | | | |
| 30 37 | 25791072 | Take-up Slider Ass'y | | | | |
| 38 | 25756198 | Gear, Rewind | | | | |
| 39 | 25764489 | Washer, PO, 1.7ϕ | | | | |
| 40 | 25773421 | Spring, Rewind | | | | |
| 41 | 25773422 | Spring, FF | | | | |
| 42 | 25771586 | Spring, Lever, High Speed | | | | |
| 43 | 25782304 | Lever, High Speed | | | | |
| 44 | 25702304 | Idler Ass'y, High Speed | | | | |
| 45 | 25791073 | Lever Ass'y High Speed | | | | |
| 46 | 25779050 | Spring, Cassette Holder | | | | |
| 49 | 25741584 | Operation Plate, Stop | | | | |
| 50 | 25741585 | Operation Plate, Record | | | | |
| 50 51 | 25741585 | Operation Plate, Rewind | | | | |
| 52 | 25741587 | Operation Plate, Playback | | | | |
| 52 53 | 25741587 | Operation Plate, Fast-forward | | | | |
| 53 54 | 25771588 | Spring | | | | |
| 55 | 25773430 | Spring Spring, Rewind Lever | | | | |
| 56 | 25773430 | Spring, Newhid Level Spring, Switch, Slider | | | | |
| 50 57 | 25776099 | Spring, Play Slider | | | | |
| 37 | 20110099 | opining, i tay officer | | | | |

| Symbol No. | Part No. | Description | | | | |
|------------|----------|---------------------------------------|--|--|--|--|
| 58 | 25776060 | Spring, FF Lever | | | | |
| 59 | 25776061 | Spring, Stop Lever | | | | |
| 60 | 25782331 | Plate, Rock | | | | |
| 63 | 25748418 | Lever, ASO Pause | | | | |
| 64 | 25751593 | Cam-wheel | | | | |
| 65 | 25756199 | Gear ASO A | | | | |
| 66 | 25756200 | Gear, ASO B | | | | |
| 67 | 25761407 | Spacer, ASO Lever | | | | |
| 69 | 25771586 | Spring, ASO Slider | | | | |
| 70 | 25776062 | Spring, ASO Lever | | | | |
| 71 | 25782302 | ASO Lever | | | | |
| 72 | 25782306 | Lever, ASO | | | | |
| 73 | 25782309 | Lever, ASO Bias | | | | |
| 74 | 25735197 | G Ring, 2.5 <i>ϕ</i> | | | | |
| . 75 | 25741589 | Operation Plate, Pause | | | | |
| 76 | 25748424 | Lever, Lock, Pause | | | | |
| 78 | 25771594 | Spring, Pause Lever | | | | |
| 79 | 25773446 | Spring, Lock, Pause | | | | |
| 80 | 25783211 | Bush, 3ϕ | | | | |
| 85 | 25756189 | Gear, Reverse, A | | | | |
| 86 | 25771544 | Spring, Gear Lock Lever | | | | |
| 87 | 25771964 | Spring, Lever, Bias | | | | |
| 88 | 25713503 | Gear Ass'y, Reverse B | | | | |
| 89 | 25791064 | Lever Ass'y, Repeat | | | | |
| 90 | 25771963 | Spring, Cassette Holder | | | | |
| 91 | 25715182 | Brake Lever Ass'y (T) | | | | |
| 92 | 25715183 | Brake Lever Ass'y (S) | | | | |
| 93 | 25783199 | Washer, PA, 2ϕ | | | | |
| 94 | 22707473 | Screw, 2.6 ϕ × 6mm (BID) | | | | |
| 95 | 25720130 | Nut, 2.6 <i>ϕ</i> | | | | |
| 96 | 25761354 | Cushion, Arm | | | | |
| 97 | 25774556 | Spring, Record | | | | |
| 99 | 22707429 | Screw, 2.6ϕ | | | | |
| 101 | 25761238 | Cushion, Motor | | | | |
| 102 | 25791081 | Motor Ass'y | | | | |
| 103 | 22703118 | E Ring, 2φ | | | | |
| 105 | 22703280 | E Ring, 4 ϕ | | | | |
| 112 | 25761403 | Cushion, Button | | | | |
| 113 | 25782318 | Button, Play, Rewind, FF, | | | | |
| | | Pause, Stop | | | | |
| 118 | 25782319 | Button, Record | | | | |
| 120 | 25764550 | Washer, PO, 3.6ϕ | | | | |
| 128 | 25755359 | Belt, Counter | | | | |
| 129 | 25873212 | Counter | | | | |
| 130 | 22707451 | Screw, 2φ x 5mm | | | | |
| 131 | 22707300 | Screw, Tapping, 2.6 ϕ x 6mm(BID) | | | | |
| 132 | 25772240 | Spring, Head | | | | |
| 133 | 25776126 | Spring, Search Slider | | | | |

| Symbol No. | Part No. | Description | | Symbol No. | Part No. | Description |
|------------|----------|--|---------------------|------------|------------|-------------------------------------|
| 134 | 25776058 | Spring, Head Slider | | 332 | 22707512 | Screw, $3\phi \times 6$ mm (FT BID) |
| 135 | 25779020 | Spring, Head Slider Hold | 1 | 333 | 22707535 | Screw, 2.6φ x 12mm (BID) |
| 138 | 25757120 | Ball, Steel 3 ϕ | | 334 | 22701313 | Screw, 3\phi x 4mm (BID) |
| 139 | 25735242 | Washer, CS, Head Chassis | | 335 | 22703269 | Washer |
| 140 | 25776127 | Spring | | 336 | 22874027 | Foot |
| 141 | 22707366 | Screw, 2.6φ × 6mm (BID) | | 337 | 22707536 | Screw, 3φ x 10mm (BID) (VF) |
| 145 | 25773448 | Spring, Record Lock | | 338 | 22950753 | Label, Voltage (VF) |
| 147 | 25791078 | Mechanism Cover Ass'y | | | | |
| 148 | 25771780 | Spring, Sift Lever | | | | |
| 151 | 25758035 | Pulley, Center | | | | |
| 156 | 25764582 | Washer, PO, 4ϕ | | | | |
| | 1 | Washer, PO, 2ϕ | | | | |
| 157 | 25764583 | | | | - A NO.070 | 0 010050 4110 10/0 |
| 158 | 22707151 | Screw, 2.6¢ x 5mm (BID) | |] 1 | RANSISTOF | RS, DIODES AND IC'S |
| 159 | 25772438 | Spring, Erase Head | ŀ | Q401, 402 | | IC, TA7322P |
| 160 | 25726489 | Sleeve, Erase Head | | Q403, 404 | | IC, TA7136P |
| 161 | 22707499 | Screw, 2φ x 8mm (DT BID) | | Q405, 406 | | Transistor, 2SC1815-GR |
| 162 | 25782257 | Cassette Holder, Right | | Q407, 408 | | Transistor, 2SA1015-GR |
| 163 | 25782292 | Cassette Holder, Left | | Q409, 410 | 22114681 | IC, NE646BN-C |
| | | | | Q411, 412 | 2211.001 | IC, TA7140P |
| - | | Britania de la Companya del Companya de la Companya del Companya de la Companya d | | Q501, 502 | | Transistor, 2SC1815-GR |
| | | | | Q501, 302 | | Transistor, 2SA1015-GR |
| | | | | Q504 | | 1 2 |
| | | | 1 | i | - | Transistor, 2SC1815-GR |
| | CABIN | NET PARTS | | Q505 | 00444770 | IC, TA7318P |
| 201 | 25010426 | Examt Band Assis (TA TC VE) | 1 | Q506 | 22114770 | IC, LM3914N |
| 301 | 25819436 | Front Panel Ass'y (TA, TC, VF) | | Q507,508 | | Transistor, 2SC1815-GR |
| 301 | 25819437 | Front Panel Ass'y (TE, TU, AY) | | Q509 | | Transistor, 2SA562-Y |
| 302 | 25764536 | Washer | | Q510, 511 | | Transistor, 2SC1815-GR |
| 303 | 25772471 | Spring, Knob | | Q512, 513 | | Transistor, 2SC1959-Y |
| 304 | 25837228 | Knob, Push | | Q901 | | Transistor, 2SC1959-Y |
| 305 | 22834944 | Knob, Base | | Q902 | | Transistor, 2SA562-Y |
| 306 | 25829387 | Side Board, Left | | Q903, 904 | | Transistor, 2SC1626-Y |
| 307 | 25829388 | Side Board, Right | | D501 | | Diode, TLG208 |
| 308 | 25837198 | Knob, Volume A | | D502 | | Diode, TLR208 |
| 309 | 25837199 | Knob, Volume B | | D503 | | Diode, S4378 |
| 310 | 25837317 | Knob, Lever | \triangle | D901, 902 | 22115485 | Diode, WL02M |
| 311 | 25838242 | Cover, Head | | D903 | | Diode, 02Z13A |
| 312 | 25816562 | Knob Ass'y, Power | | D904 | | Diode, 02Z6.2A |
| 313 | 25829396 | Jack Plate (TA, TC) | | 1. | | |
| 313 | 25829397 | Jack Plate (TE) | | | | |
| 313 | 25829398 | Jack Plate (TU, AY) | | | 1 | |
| 313 | 25829399 | Jack Plate (VF) | ' | 4.4 | | |
| 314 | 25832385 | Indicator, Meter | | | | |
| 315 | 25835408 | Foot | | | | |
| 320 | 25845528 | Bush, Nylon (TE, TU, AY) | | | ELECT | RICAL PARTS |
| 320 | 25845120 | | Δ | Τ1 | 22223737 | Transformer, Power (TE) |
| 322 | 22707473 | Screw, 2.6φ x 6mm (BID) | $\overline{\Delta}$ | T1 | 22223738 | Transformer, Power (TU, AY) |
| | 1 | Screw, 2.6 ϕ x 5mm (DT BID) | Δ | T1 | 22223736 | Transformer, Power (TA, TC) |
| 324 | 22707350 | | Δ | T1 | 22223739 | Transformer, Power (VF) |
| 325 | 22707445 | Screw, 3\psi x 6mm (DT BID) | | S1 | | Slide Switch, Rec./Play. |
| 326 | 22707066 | Screw, 3¢ x 6mm (BID) | | S1 S2 | 22195464 | Lever Switch, Bias |
| 327 | 22701482 | Screw, $3\phi \times 6$ mm (PAN) | | | 22195361 | I |
| 330 | 22707327 | Screw, Tapping, 3\phi x 8mm (BID) | | S3 | 22195362 | Lever Switch, EQ |
| 331 | 22707040 | Screw, $4\phi \times 6$ mm (BID) | | S4 | 22195440 | Push Switch, Dolby |
| | 1.1 | | | S5 | 22195465 | Leaf Switch, Muting |
| | L | | 1 1 | <u> </u> | L | <u> </u> |

| | | | T | _ | | · | |
|--------------------|------------------------|--------------------------------------|---------------------------------|-----------|------------------------|----------|----------------------------------|
| | Symbol No. | Part No. | Description | | Symbol No. | Part No. | Description |
| \triangle | S6 | 22146295 | Push Switch, Power | | C459, 461 | 22480006 | EL, 0.33mfd, 50V |
| | 62.00 | A | (TE, TU, AY, VF) | | C461, 462 | 22480003 | EL, 0.1mfd, 50V, K |
| \triangle | S6 | 22195226 | Push Switch, Power (TA, TC) | | C463, 464 | 22445100 | EL, 10mfd, 16V |
| ∇ | S7 | 22146186 | Slide Switch, Power Select (VF) | | C465, 466 | 22372473 | MY, 0.047mfd, 50V, K |
| | L401, 402 | 22232207 | Coil, Trap (2.2mH) | | C467, 468 | 22372102 | MY, 1000pF, 50V, K |
| | L403, 404 | 22232203 | Coil, Trap (22mH) | İ | C469, 470 | 22445100 | EL, 10mfd, 16V |
| | Z401, 402 | 22153075 | Filter, Dolby | | C471, 472 | 22445100 | EL, 10mfd, 16V |
| | Z501 | 22132530 | Bias OSC Unit | | C473, 474 | 22448339 | EL, 3.3mfd, 50V |
| | N1 | 22113397 | Lamp, 14V/80mA | | C475, 476 | 22445100 | EL, 10mfd, 16V |
| | J401 | 22163759 | Jack, US PIN | | C477, 478 | 22445330 | EL, 33mfd, 16V |
| | J402 | 22163675 | Jack, Microphone | | C479, 480 | 22372102 | MY, 1000pF, 50V, K |
| | J403 | 22163777 | Jack, Headphone | | C473, 480 C481, 482 | 22486470 | EL, 47mfd, 25V |
| Δ | E1 | | Cord, Power (TE) | | C481, 482 C483, 484 | 22448339 | 1 |
| | | | | | | t | EL, 3.3mfd, 50V |
| \triangle | E1 | | Cord, Power (TU) | | C485, 486 | 22372103 | MY, 0.01mfd, 50V, K |
| <u> </u> | E1 | A TOTAL OF THE STREET, AND ASSESSED. | Cord, Power (AY) | | C501 | 22445470 | EL, 47mfd, 16V |
| \triangle | E1 | 22176573 | Cord, Power (TA, TC) | | C502 | 22380101 | PS, 3900pF, 200V, K |
| $^{\prime}$ Φ | E1 | 221/6125 | Gord, Power (VF) | | C503 | 22483101 | EL, 100mfd, 10V |
|) | | | | | C505, 506 | 22372103 | My, 0.01mfd, 50V, K |
| | | | | | C507, 508 | 22371103 | MY, 0.01mfd, 50V, J |
| | | l | | 1 | C509 | 22485221 | EL, 220mfd, 16V |
| | | C.A | APACITORS | | C510 | 22445100 | EL, 10mfd, 16V |
| | D=±0.5pF, J | l=±5%, K=± | 10% | | C511 | 22448339 | EL, 3.3mfd, 50V |
| | ABBREVIA | TIONS: CD | =Ceramic Disk, EL=Electrolytic | | C901, 902 | 22487102 | EL, 1000mfd, 35V |
| | | M | /=Mylar, PS=Polystyrene | | C903, 904 | 22486331 | EL, 330mfd, 25V |
| | C401, 402 | 22272102 | MY, 0.01mfd, 50V, K | | C905, 906 | 22486101 | EL, 100mfd, 25V |
| | C401, 402 C403, 404 | 22372103 22448339 | EL, 3.3mfd, 50V | | C907 | 22486331 | EL, 330mfd, 25V |
| | C405, 404 C405, 406 | 22349561 | | | C908 | 22486101 | EL, 100mfd, 25V |
| | C405, 400 C407, 408 | 22483101 | CD, 560pF, 50V, K | Δ | C909 | 22485102 | EL, 1000mfd, 16V |
| 7 | · · | 22371183 | EL, 100mfd, 10V | Λ | C910 | 22485331 | EL, 330mfd, 16V |
| | C409, 410 C411, 413 | | MY, 0.018 mfd, 50V, J | | C911 | 22483101 | EL, 100mfd, 10V |
| | C411, 413 | 22349331 22349221 | CD, 330pF, 50V, K | | C914, 915 | 22486101 | EL, 100mfd, 25V |
| | | 22349221 | CD, 220pF, 50V, K | | C916 | 22483331 | EL, 330mfd, 10V |
| . | | 22448339 | MY, 1000pF, 50V, K | Δ | C917 | 22340147 | CD, 0.01mfd, 400V |
| | C417, 418 | 1 | EL, 3.3mfd, 50V | | | | (TE, TU, AY, VF) |
| | C419, 420 | 22480008 | EL, 0.68mfd, 50V, K | Λ | C917 | 22340140 | |
| | | 22448339 | EL, 3.3mfd, 50V | 1. | | 4 | |
|) | | 22362470 | CD, 47pF, 50V, K | | | | |
| • | 1 | 22361100 | CD, 10pF, 50V, D | | | | |
| | 1 | 22445100 | EL, 10mfd, 16V | | - | | The second of the second of |
| | | 22371223 | MY, 0.022mfd, 50V, J | | | 200 | |
| | 1 | 22372103 | MY, 0.01mfd, 50V, K | | | BÉS | SISTORS |
| 1 | | 22372153 | MY, 0.015mfd, 50V, K | | All resisto | | 4W, carbon film unless otherwise |
| 1 | | 22448109 | EL, 1mfd, 50V | | noted. | | |
| 1 | | 22349561 | CD, 560pF, 50V, K | | | | |
| | | 22349151 | CD, 150pF, 50V, K | | R401, 402 | 22658494 | 50k ohm, Semi-fixed |
| | | 22349101 | CD, 100pF, 50V, K | | R403, 404 | 22658498 | 10k ohm, Semi-fixed |
| | | 22448339 | EL, 3.3mfd, 50V | | R405, 406 | 22658496 | 200k ohm, Semi-fixed |
| - | | 22448109 | EL, 1mfd, 50V | 4.1 | R407, 408 | 22658493 | 20K ohm, Semi-fixed |
| | | 22349151 | CD, 150pF, 50V, K | | R409, 410 | 22555224 | 220k ohm |
| | . 1 | 22445101 | EL, 10mfd, 16V | | R411,412 | 22555332 | 3.3k ohm |
| 1 | · | 22371472 | MY, 4700pF, 50V, J | | R413, 414 | 22555473 | 47k ohm |
| . | | 22371273 | MY, 0.027mfd, 50V, J | | R415, 416 | 22555105 | IM ohm |
| | | 22371562 | MY, 5600pF, 50V, J | | R501 | 22555222 | 2.2k ohm |
| . | C457, 458 | 22349471 | CD, 470pF, 50V, K | | R502 | 22547391 | 390 ohm, ½W |
| | | | | | | | |
| | | | | | | | |

| | T | |
|------------|---------------|-----------------------------|
| Symbol No. | Part No. | Description |
| R503 | 22547101 | 100 ohm, ½W |
| R504 | 22547681 | 680 ohm, ½W |
| R505, 506 | 22555221 | 220 ohm |
| R507 | 22555152 | 1.5k ohm |
| R508, 509 | 22555102 | 1k ohm |
| R510, 511 | 22555473 | 47k ohm |
| R512, 513 | 22555102 | 1k ohm |
| R514 | 22555681 | 680 ohm |
| R515 | 22655417 | 50k ohm, Variable |
| R516 | 22625013 | 10k ohm, Variable |
| R517 | 22555471 | 470 ohm |
| R518 | 22555104 | 100k ohm |
| R901 | 22547121 | 120 ohm, ½W |
| R902, 903 | 22555222 | 2.2k ohm |
| R904 | 22547181 | 180 ohm, 1/2W |
| R905 | 22547101 | 100 ohm, ½W |
| R906 | 22555471 | 470 ohm |
| R907 | 22547101 | 100 ohm, ½W |
| Followin | ng symbols ar | e ones of printed resistors |
| on P.C.E | · | |
| PR401, 402 | 22545473 | 47K ohm |
| PR403, 404 | 22545222 | 2.2K ohm |
| PR405, 406 | 22545104 | 100K ohm |
| PR407, 408 | 22545121 | 120 ohm |
| PR409, 410 | 22545331 | 330 ohm |
| PR411, 412 | 22545224 | 220K ohm |
| PR413, 414 | 22545153 | 15K ohm |
| PR415, 416 | 22545392 | 3.9K ohm |
| PR417, 418 | 22545272 | 2.7K ohm |
| PR419, 420 | 22545331 | 330 ohm |
| PR421, 422 | 22545472 | 4.7K ohm |
| PR423, 424 | 22545473 | 47K ohm |
| PR425, 426 | 22545823 | 82K ohm |
| PR427, 428 | 22545474 | 470K ohm |
| PR429, 430 | 22545682 | 6.8K ohm |
| PR431, 432 | 22545152 | 1.5K ohm |
| PR433, 434 | 22545221 | 220 ohm |
| PR435, 436 | 22545223 | 22K ohm |
| PR437, 438 | 22545222 | 2.2K ohm |
| PR439, 440 | 22545472 | 4.7K ohm |
| PR441, 442 | 22545153 | 15K ohm |
| PR445, 446 | 22545471 | 470 ohm |
| PR447, 448 | 22545103 | IOK ohm |
| PR449, 450 | 22545333 | 33K ohm |
| | | |

| Symbol No. | Part No. | Description |
|------------|----------|-----------------------------|
| PR451, 452 | 22545333 | 33K ohm |
| PR453, 454 | 22545102 | 1K ohm |
| PR455, 456 | 22545274 | 270K ohm |
| PR457, 458 | 22545224 | 220K ohm |
| PR459, 460 | 22545103 | 10K ohm |
| PR461, 462 | 22545221 | 220 ohm |
| PR463, 464 | 22545221 | 220 ohm |
| PR465, 466 | 22545103 | 10K ohm |
| PR467, 468 | 22545473 | 47K ohm |
| PR469, 470 | 22545102 | 1K ohm |
| PR471, 472 | 22545101 | 100 ohm |
| PR473, 474 | 22545103 | 10K ohm |
| PR475,476 | 22545101 | 100 ohm |
| PR477, 478 | 22545153 | 15K ohm |
| PR479, 480 | 22545104 | 100K ohm |
| PR481, 482 | 22545104 | 100K ohm |
| PR483, 484 | 22545473 | 47K ohm |
| PR485, 486 | 22545473 | 47K ohm |
| PR502 | 22545104 | 100K ohm |
| PR503 | 22545102 | 1K ohm |
| PR504, 505 | 22545103 | 10K ohm |
| PR506, 507 | 22545103 | 10K ohm |
| PR508, 509 | 22545103 | 10K ohm |
| PR510 | 22545473 | 47K ohm |
| PR511 | 22545103 | 10K ohm |
| PR512 | 22545104 | 100K ohm |
| | ACCE | SSORIES |
| | 22902491 | Owner's Manual (TA) |
| | 22902492 | Owner's Manual (TC) |
| | 22902493 | Owner's Manual (TE, TU, AY) |
| | 22902495 | Owner's Manual (VF) |
| | 22164775 | Junction Cord |
| | 22990374 | Cleaner, Head |
| , | | |
| | | |
| | | |
| | | |
| 4 4 | | |
| | | |
| 4.0 | | |
| | | |
| | | |

TOSHIBA CORPORATION

2-1, GINZA 5-CHOME, CHUO-KU, TOKYO 104, JAPAN